

What is claimed is:

1. A semiconductor device comprising:  
a semiconductor substrate having a first conductive layer provided  
5 therein;  
an insulation layer provided above the semiconductor substrate;  
a semiconductor layer provided above the insulation layer; and  
a second conductive layer provided above the semiconductor layer  
or in the semiconductor layer, and electrically connected to the first  
10 conductive layer.

2. The semiconductor device as defined by claim 1,  
wherein the first conductive layer is formed from an impurity layer.

15 3. The semiconductor device as defined by claim 1,  
wherein the first conductive layer functions as a wiring layer.

4. The semiconductor device as defined by claim 1,  
wherein the first conductive layer functions as a resistance layer.

20 5. The semiconductor device as defined by claim 1,  
wherein a connection hole is provided for connecting the first  
conducting layer to the second conductive layer, and  
wherein a contact layer is provided in the connection hole.

25 6. The semiconductor device as defined by claim 1,  
wherein a side wall is provided in the connection hole.

7. A semiconductor device comprising:  
a semiconductor substrate having a contact region provided therein;  
an insulation layer provided above the semiconductor substrate; and  
a semiconductor layer provided above the insulation layer; and  
a conductive layer provided above the semiconductor layer or in the  
semiconductor layer, and has a function of allowing charge to flow into  
the semiconductor substrate, said contact region being electrically  
connected to said conductive layer.

8. The semiconductor device as defined by claim 7,  
wherein the contact region is formed from an impurity layer.

9. The semiconductor device as defined by claim 7,  
wherein a pn junction is formed by the contact region and the  
semiconductor substrate.

10. The semiconductor device as defined by claim 9,  
wherein the semiconductor substrate is n-type, and  
wherein the contact region is p-type.

11. The semiconductor device as defined by claim 9,  
wherein the semiconductor substrate is p-type, and  
wherein the contact region is n-type.

12. The semiconductor device as defined by claim 7,  
wherein a connection hole is provided for connecting the contact

region to the conductive layer, and  
wherein a contact layer is provided in the connection hole.

13. The semiconductor device as defined by claim 12,  
5 wherein a side wall is provided in the connection hole.

14. A semiconductor device comprising:  
a semiconductor substrate having a first electrode provided therein;  
an insulation layer provided above the semiconductor substrate;  
10 a semiconductor layer provided above the insulation layer, the  
semiconductor layer having a second electrode provided therein; and  
the first electrode, the second electrode, and the insulation layer  
in cooperation turning a capacitive element.

15 15. The semiconductor device as defined by claim 14,  
wherein the first electrode is formed from a first impurity layer.

16. The semiconductor device as defined by claim 14,  
wherein the second electrode is formed from a second impurity layer.

20 17. The semiconductor device as defined by claim 14,  
wherein the first electrode is connected electrically to a conductive  
layer provided above the semiconductor layer or in the semiconductor layer.

25 18. The semiconductor device as defined by claim 17,  
wherein a connection hole is provided for connecting the first  
electrode to the conductive layer, and

first conductive layer to the second conductive layer; and  
a step of forming a contact layer in the connection hole.

24. The method of manufacturing a semiconductor device as defined by claim 23, further comprising:

a step of forming a side wall in the connection hole.

25. A method of manufacturing a semiconductor device including a semiconductor substrate, an insulation layer provided above the semiconductor substrate, and a semiconductor layer provided above the insulation layer, wherein a contact region is provided in the semiconductor substrate, and the contact region is connected electrically to a conductive layer provided above the semiconductor layer or in the semiconductor layer, and has a function of allowing charge to flow into the semiconductor substrate, the method comprising:

a step of forming the contact region by implantation of ions of an impurity into the semiconductor substrate; and

a step of electrically connecting the contact region to the conductive layer.

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26. The method of manufacturing a semiconductor device as defined by  
claim 25, further comprising:

a step of forming a contact hole for electrically connecting the contact region to the conductive layer formed in the semiconductor layer;

25 and

a step of forming a contact layer in the connection hole.

27. The method of manufacturing a semiconductor device as defined by  
claim 26, further comprising:

a step of forming a side wall in the connection hole.

5 28. A method of manufacturing a semiconductor device including a  
semiconductor substrate, an insulation layer provided above the  
semiconductor substrate, and a semiconductor layer provided above the  
insulation layer, the method comprising:

10 a step of forming a capacitive element, wherein the capacitive  
element is formed from a first electrode provided in the semiconductor  
substrate, the insulation layer, and a second electrode provided in the  
semiconductor layer,

15 wherein the step of forming the capacitive element comprises a step  
of implanting ions of an impurity into the semiconductor substrate to form  
the first electrode from a first impurity layer.

29. The method of manufacturing a semiconductor device as defined by  
claim 28,

20 wherein the step of forming the capacitive element further comprises  
a step of implanting ions of an impurity into the semiconductor layer to  
form the second electrode from a second impurity layer.

30. The method of manufacturing a semiconductor device as defined by  
claim 28,

25 wherein the semiconductor device has a conductive layer provided  
above the semiconductor layer or in the semiconductor layer, and  
wherein the method further comprises:

a step of forming a connection hole for electrically connecting the first electrode to the conductive layer; and  
a step of forming a contact layer in the connection hole.

5 31. The method of manufacturing a semiconductor device as defined by claim 30, further comprising a step of forming a side wall in the connection hole.